

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the above-referenced application.

Listing of Claims:

1. (Currently Amended) A method for transferring data from at least one local data storage device to at least one remote data storage device, comprising:

subdividing the data into portions;

assigning a sequence number to each of the portions, wherein there is a first set of writes to the at least one local storage device for a first set of portions having a first sequence number and the first set of writes is are begin before a second set of writes for a second set of portions having a second sequence number that is assigned after to the first sequence number; and

updating the sequence number in response to a particular sequence number having been used before and there being data in response to data being available to send from the at least one local storage device to the at least one remote storage device.

2. (Currently Amended) A method, according to claim 1, wherein the at least one local storage device includes a plurality of storage entities is part of a group of storage devices that form a consistency group.

3. (Currently Amended) A method, according to claim 2, further comprising:

passing a shuttle between the entities of the group of storage devices that form the consistency group; and

using the shuttle to determine if a particular sequence number has been used before.

4. (Currently Amended) A method, according to claim 3, wherein updating the sequence number includes a particular one of the entities storage devices of the consistency group using the shuttle to determine if the particular one of the entities storage devices has used the particular sequence number before and, if so, the particular one of the entities storage devices updating the sequence number in response to the particular one of the entities storage devices having data to be sent to the at least one remote storage device.

5. (Original) A method, according to claim 1, further comprising:

maintaining a running total of an amount of data associated with each of the sequence numbers.

6. (Currently Amended) A method, according to claim 5, wherein the at least one local storage device includes a plurality of storage entities is part of a group of storage devices that form a consistency group.

7. (Currently Amended) A method, according to claim 6, further comprising:

passing a shuttle between the entities storage devices of the consistency group; and
using the shuttle for maintaining the running total of data associated with each of the
sequence numbers.

8. (Currently Amended) A method, according to claim 7, wherein updating the sequence number
includes a particular one of the entities storage devices of the consistency group using the shuttle
to determine if the particular one of the entities storage devices has used the particular sequence
number before and, if so, the particular one of the entities storage devices updating the sequence
number in response to the particular one of the entities storage devices having data to be sent to
the at least one remote storage device.

9. (Original) A method, according to claim 8, further comprising:

following updating the sequence number, transferring data having a previous sequence
number from the at least one local storage device to the at least one remote storage device.

10. (Original) A method, according to claim 9, further comprising:

prior to transferring data, buffering the data in an auxiliary storage area associated with
the at least one local storage device.

11. (Currently Amended) A computer program product, provided in a computer-readable storage medium, that transfers data from at least one local data storage device to at least one remote data storage device, comprising:

executable code, provided in the computer-readable storage medium, that maintains the data subdivided into portions;

executable code, provided in the computer-readable storage medium, that assigns a sequence number to each of the portions, wherein there is a first set of writes to the at least one local storage device for a first set of portions having a first sequence number and the first set of writes is begun before a second set of writes for a second set of portions having a second sequence number that is assigned after to the first sequence number; and

executable code, provided in the computer-readable storage medium, that updates the sequence number in response to a particular sequence number having been used before and there being data in response to data being available to send from the at least one local storage device to the at least one remote storage device.

12. (Currently Amended) A computer program product, according to claim 11, wherein the at least one local storage device includes a plurality of storage entities is part of a group of storage devices that form a consistency group.

13. (Currently Amended) A computer program product, according to claim 12, further comprising:

executable code, provided in the computer-readable storage medium, that passes a shuttle between the entities storage devices of the consistency group; and
executable code, provided in the computer-readable storage medium, that uses the shuttle to determine if a particular sequence number has been used before.

14. (Currently Amended) A computer program product, according to claim 13, wherein executable code that updates the sequence number includes executable code that causes a particular one of the entities storage devices of the consistency group using the shuttle to determine if the particular one of the entities storage devices has used the particular sequence number before and, if so, causes the particular one of the entities storage devices to update the sequence number in response to the particular one of the entities storage devices having data to be sent to the at least one remote storage device.

15. (Currently Amended) A computer program product, according to claim 11, further comprising:

executable code, provided in the computer-readable storage medium, that maintains a running total of an amount of data associated with each of the sequence numbers.

16. (Currently Amended) A computer program product, according to claim 15, wherein the at least one local storage device ~~includes a plurality of storage entities~~ is part of a group of storage devices that form a consistency group.

17. (Currently Amended) A computer program product, according to claim 16, further comprising:

executable code, provided in the computer-readable storage medium, that passes a shuttle between the entities storage devices of the consistency group; and
executable code, provided in the computer-readable storage medium, that uses the shuttle for maintaining the running total of data associated with each of the sequence numbers.

18. (Currently Amended) A computer program product, according to claim 17, wherein executable code that updates the sequence number includes executable code that causes a particular one of the entities storage devices of the consistency group using the shuttle to determine if the particular one of the entities storage devices has used the particular sequence number before and, if so, causes the particular one of the entities storage devices updating the sequence number in response to the particular one of the entities storage devices having data to be sent to the at least one remote storage device.

19. (Currently Amended) A computer program product, according to claim 18, further comprising:

executable code, provided in the computer-readable storage medium, that transfers data having a previous sequence number from the at least one local storage device to the at least one remote storage device following updating the sequence number.

20. (Currently Amended) A computer program product, according to claim 19, further comprising:

executable code, provided in the computer-readable storage medium, that buffers the data in an auxiliary storage area associated with the at least one local storage device prior to transferring data.